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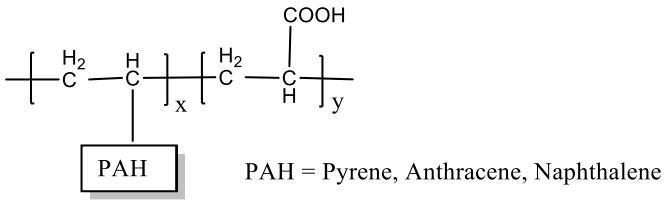
ACRYLIC ACID BASED CONVENIENT SYNTHESIS OF POLYCYCLIC AROMATIC HYDROCARBON-CONTAINING COPOLYMERS*

Keywords: polycyclic aromatic hydrocarbon (PAH), acrylic acid, copolymers, synthesis, fluorescence studies.

Polycyclic aromatic hydrocarbon (PAH) derivatives exhibit unique fluorescence properties including high quantum yield, long fluorescence lifetime and excellent photostability [1], and can be used in biological fluorescent probe, press-sensitive materials and organic light emitting diodes [2]. In the area of polymer materials, PAH is usually introduced into the polymer to label macromolecular chains, improve polymer fluorescence or modify carbon nanotubes [3]. Herein, we are pleased to report convenient approaches for the synthesis of few PAH containing copolymers (such as pyrene, anthracene and naphthalene) based on acrylic acid. First, we have carried out vinylation of the PAH for the synthesis of starting vinyl PAH. We used various proportion of acrylic acid with respect to the starting vinyl PAH.



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SYNTHESYS AND PHOTOPHYSICAL PROPERTIES OF 2-(HET)ARYLDERIVATIVES OF 4-MORPHOLINYLQUINAZOLINES*

Keywords: 4-(4-morpholinyl)quinazolines, cross-coupling, fluorescence.

D-π-A conjugated organic molecules draw attention due to their possible application as non-linear optical (NLO) materials [1], organic light-emitting diodes (OLEDs) [2], pH/polarity sensors [3] etc. Quinazoline core can serve as electron-withdrawing part of such systems while different phenol and aniline derivatives represent electron-donating part.

In light of great interest to benzazine-based chromophores 2-(thiophen-2-yl)-4-(morpholin-4-yl)quinazoline derivatives **1** have been synthesized and their photophysical properties as well as the influence of medium acidity have been studied [4]. The ability of quinazoline derivative **1g**, bearing diethylaminophenyl moiety at position 5’ of thiophene ring, to function as colorimetric and luminescent pH sensor has been demonstrated with significant color change and luminescence switching upon the introduction of trifluoroacetic acid.